

## CLAIMS

1. A gas combustion type hair drier comprising:
  - a gas tank in which fuel gas is stored;
  - 5 a combustor including a primary combustion chamber, combusting mixed gas with the fuel gas, supplied from the gas tank, and primary air, and a secondary combustion chamber to which gases, resulting from combustion in the primary combustion chamber, and secondary air are supplied for combustion;
  - 10 a blower blowing off air, heated in the combustor, to an outlet of a tubular casing in which the combustor is mounted;
  - 15 a power supply rotating a motor of the blower;
  - an ignition device igniting the fuel gas; and
  - an ejector that draws the primary air into a gas flow path, leading from the gas tank to the combustor, due to a negative pressure caused by a flow speed of the fuel gas supplied to the combustor.
2. The gas combustion type hair drier according to claim 1, wherein the combustor has a tubular section, with a substantially circular cross-section, which is disposed between the blower and the outlet and has a plurality of fins that form air flow passages between an outer peripheral surface of the combustor and an inner peripheral surface of the casing, and the combustor includes the primary combustion chamber, disposed in the tubular section, the secondary combustion chamber disposed in a forward area of the tubular section, a gas combusting section disposed in a central area of the primary combustion chamber, a plurality of recessed portions formed on an inner wall of the primary combustion chamber and extending in a fore and aft direction, and a plurality of secondary air delivery passages through which the secondary air is supplied to the secondary combustion chamber.
- 30 3. The gas combustion type hair drier according to claim 2, wherein the gas

combusting section has a forward end on which a mixed gas straight movement restrictor is disposed.

4. A gas combustion type hair drier comprising:

- 5      a gas tank in which fuel gas is stored;
- a combustor combusting the fuel gas supplied from the gas tank;
- a blower blowing off air, heated in the combustor, to an outlet of a tubular casing in which the combustor is mounted;
- a power supply rotating a motor of the blower;
- 10     an ignition device igniting the fuel gas;
- a magnet unit operative to keep a supply of the fuel gas to a gas flow path leading from the gas tank to the combustor;
- an ignition detector detecting an ignited condition depending on an external wall temperature of the combustor;
- 15     an overheat detector detecting an overheated condition of hot blast resulting from the combustion chamber; and
- a switching controller operative to control the magnet unit and operation of the blower in response to detection signals delivered from the ignition detector and the overheat detector.

20

- 5. The gas combustion type hair drier according to claim 4, wherein the switching controller is operative to shut off the magnetic unit to stop supplying the fuel gas while stopping a supply of a blast from the blower when the ignition detector detects an absence of the ignition or shut off the magnet unit to stop supplying the fuel gas and continuing to supply the blast from the blower for a fixed time interval for cooling the combustor while subsequently stopping the operation of the combustor when the overheat detector detects that the hot blast, heated in the combustor, remains in the overheated condition.

30     6. A method of generating negative ions in a gas combustion type hair drier

which has a gas tank in which fuel gas is stored, a combustor including a primary combustion chamber, which combusts mixed gas with the fuel gas, supplied from the gas tank, and primary air, and a secondary combustion chamber for combustion of gases, resulting from combustion in the primary chamber, and  
5 supplied secondary air, and an ignition device by which the fuel gas is ignited, the method comprising:

- mixing the fuel gas and the primary air to form the mixed gas for ejecting the same to the primary combustion chamber;
- 10 permitting the ejected mixed gas to be combusted in the primary combustion chamber with the ignition device;
- permitting gases, resulting from combustion in the primary chamber, to be supplied to the secondary combustion chamber and mixed with the secondary air for complete combustion while causing turbulent flows to occur; and
- 15 activating molecular motions of a large number of water molecules generated upon combustion of the fuel gas thereby generating the negative ions.